IVANOV, Vasiliy Alekseyevich; MOLODENKOV, Mikhail Nikolayevich;
LOPUKHIN, Yuriy Mikhaylovich; PISAREVSKIY, A.A., red.;
MIRONOVA, A.M., tekhn. red

[Surgery] Khirurgiia. Moskva Medgiz, 1963. 426 p.
(SURGERY) (MIRA 16:6)

STRUCHKOV, Viktor Ivanovich; OSTROVSKAYA, L.S., red.; PISAREVSKIY, A.A., red.; MIRONOVA, A.M., tekhn. red.

[General surgery]Obshchaia khirurgiia. Moskva, Medgiz, 1962. 494 p. (MIRA 15:8)

(SURGERY)

BELKIN, Vitaliy Rafailovich, nauchnyy sotr.; ROGKIN, Nikolay
Semenovich, inzh.; PISAREVSKIY, A.A., red.; PRONINA, N.L.,
tekhn. red.

[Apparatus for suturing elements of the root of the lung
(UKL-60 and UKL-40)]Apparaty dlia ushivaniia elementov kornia
legkogo (UKL-60 i UKL-400. Moskva, Medgiz, 1962. 4[illegible] p.

(SUTURES) (LUNGS—SURGERY) (MIRA 16:1)

NOVIKOV, Yu.I.; PISAREVSKIY, A.A., kand.med.nauk

Acute pancreatitis in pregnancy at term. Akush.i gin. no.4:
118-120 '61.
(MIRA 15:5)

1. Iz rodil'nogo doma imeni prof. Snegirova (nauchnyy rukovoditel' - prof. M.A. Petrov- Maslakov, glavnyy vrach A.A. Doder).
(PREGNANCY, COMPLICATIONS OF) (PANCREAS—DISEASES)

KOLESNIKOV, Ivan Stepanovich; VIKHRIYEV, Boris Sergeyevich; PISAREVSKIY, A.A., red.; LYUDKOVSKAYA, N.I., tekhn. red.

[Surgical treatment of deep thermal burns] Operativnoe lechenie glubokikh termicheskikh ozhogov. Moskva, Medgiz, 1962. 177 p.

(BURNS AND SCALDS) (SKIN--GRAFTING) (MIRA 15:6)

GAL'PERIN, Eduard Izrailevich; OSTROVSKAYA, Inna Mironovna;
PISAREVSKIY, A.A., red.

[Contrast examination in surgery of the biliary tract]
Kontrastnoe issledovanie v khirurgii zhelchnykh putei.
Moskva, Meditsina, 1964. 163 p. (MIRA 17:12)

KRAKOVSKIY, Nikolay Ivanovich; MAZAYEV, Pavel Nikolayevich; PISAREVSKIY, A.A., red.
[Angiography in surgery on the vessels of the extremities and the neck] Angiografiia v khirurgii sosudov konechnostei i shei. Moskva, Meditsina, 1964. 287 p.
(MIRA 17:5)

ZHOROV, Isaak Solomorovich, prof.; PISAREVSKIY, A.A., red.

[General anesthesia; a handbook for anesthesiologists and surgeons] Obshchee obezbolivanie; rukovodstvo dlia vrachei-anesteziologov i khirurgov. Moskva, Izd-vo "Meditsina,"
(MIRA 17:[illegible])

BEREZOV, Yu.Ye.; DOBROVA, N.B.; PISAREVSKIY, A.A.; POKROVSKIY, A.V.

Method of excluding the left ventricle of the heart for thoracic aorta. Grud. khir. 4 no.6:25-29 N-D'62. (MIRA 16:10)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR. Adres avtorov: Moskva, V-49, Leninskiy prospekt, d.8, Institut serdechno-sosudistoy khirurgii AMN SSSR.
(AORTA--SURGERY) (BLOOD--CIRCULATION, ARTIFICIAL)

SERGEYEV, V.M., kand.med.nauk; PISAREVSKIY, A.A. (Moskva)

Therapy for terminal states. Fel'd. i akush. 27 no.8:41-48
Ag'62. (MIRA 16:8)
(DEATH, APPARENT) (RESUSCITATION)

STREL'NIKOV, B.Ye.; PISAREVSKIY, A.A., red.; BEL'CHIKOVA, Yu.S.,
tekhn. red.

[Epithelial cysts of the sacrococcygeal region]Epitelial'nye kisty kresttsovo-kopchikovoi oblasti. Moskva, Medgiz, 1962. 87 p. (MIRA 15:11)
(CYSTS) (SACROCOCCYGEAL REGION--TUMORS)

GAL'PERIN, Eduard Izrailevich; OSTROVSKAYA, Inna Mironovna;
PISAREVSKIY, A.A., red.

[Contrast examination in surgery on the biliary tract]
Kontrastnoe issledovanie v khirurgii zhelchnykh putei. Moskva, Meditsina, 1964. 163 p. (MIRA 17:4)

PISAREVSKIY, A. A. Cand Med Sci -- (diss, "~~The~~ [illegible] ~~Its Combatting a~~ Transpleural [illegible] the E[illegible] Cardia." Len, [illegible] (Len [illegible]iatric Medical Inst, Hospital i. Kuybyshev , 100 copies (KL, [illegible]7, [illegible]

PISAREVSKIY, A.A. (Leningrad, ul. Saltykova-Shchedrina, d.29, kv.11)

Shock prevention in transpleural surgery for cancer of the esophagus and heart [with summary in English, p.158] Vest.khir. 78 no.3:31-39 Mr '57. (MLRA 10:6)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. S.V. Geynats) pri bol'nitse im. Kyubysheva Leningradskogo pediatricheskogo meditsinskogo instituta.
(ESOPHAGUS, neoplasms
surg., shock prev. in transpleural technic (Rus))
(HEART, neoplasms
same)
(SHOCK, PREV. & control
in surg. of cancer of esophagus & heart (Rus))

LEPNEV, Panteleymon Grigor'eyvich; PISAREVSKIY, A.A., redaktor; BULEVA, M.S., tekhnicheskiy redaktor

[Clinical aspects of foreign bodies in the larynx, trachea and bronchi] Klinika inorodnykh tel gortani, trakhei i bronkhov. [Leningrad] Gos. izd-vo med. lit-ry, Leningradskoe otd-nie, 1956. 209 p. (MLRA 10:3)
(RESPIRATORY ORGANS--FOREIGN BODIES)

PISAREVSKIY A. A. EXCERPTA MEDICA Sec 16 Vol. 5/9 Cancer Sept. 57

3518. PISAREVSKIY A. A. *Shock-preventing policy in transpleural operations for cancer of the oesophagus and cardia (Russian text)* Vestn. Khir. 1957, 78/3 (31-39) Tables 2

In 127 patients different indices of haemodynamics, respiration, general condition and temperature regulation were assessed in the pre-operative, operative and immediate post-operative periods. 109 patients underwent a radical transpleural resection of the oesophagus, 18 patients a palliative intervention or exploratory thoracotomy. An early shock condition of varying severity arose in 24 patients. Modern complex shock management appropriated to its acuity resulted in recovery of 22 patients, the 2 deaths on the operation table being due to irreversible shock induced by a bilateral pneumothorax. The fundamentals of the treatment policy are a thorough analgesia combined with massive blood transfusion, active oxygen therapy, period of rest during the operation and also vitamins, stimulants, heart remedies etc. In the post-operative period late shock condition arose in 33 out of 120 patients. Death ensued in 3 instances where complications occurred during the intervention. Thirty patients recovered.

POLENOV, Andrey L'vovich, professor; BABCHIN, I.S., professor, redaktor; BONDARCHUK, A.V., professor, redaktor; VASKIN, I.S., dotsent, redaktor; PISAREVSKIY, A.A., redaktor; RULEVA, M.S., tekhnicheskiy redaktor.

[Selected works] Izbrannye trudy. [Leningrad] Gos. izd-vo med. lit-ry, Leningradskoe otd-nie, 1956. 365 p. (MIRA 9:11)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Polenov)
(TRAUMATISM)

BURLUTSKIY, Aleksandr Petrovich; PISAREVSKIY, A.A., red.; BALDINA, N.F., tekhn. red.

[Tumors of the pineal body] Opukholi shishkovidnoi zhelezy. Moskva, Medgiz, 1962. 167 p. (MIRA 15:7)
(PINEAL BODY—TUMORS)

IVANOV, Vasiliy Alekseyevich; MOLODENKOV, Mikhail Nikolayevich;
LOPUKHIN, Yuriy Mikhaylovich; PISAREVSKIY, A.A., red.

[Surgery] Khirurgiia. 2. izd., perer. i dop. Moskva,
Meditsina, 1965. 445 p. (MIRA 18:7)

LAZAREV, [illegible] A. V. [illegible]
[illegible], I. [illegible], A.A. [illegible]

A[illegible]
diseases [illegible] A[illegible]
[illegible]

[illegible], A. [illegible]

New [illegible]

KRASNOSHCHEKOVA, Lidiya Ivanovna; PISAREVSKIY, Averiy Aleksandrovich; TAL'MAN, I.M., red.; BUGROVA. T.I., tekhn. red.

[Prevention and treatment of shock in transpleural surgery of the lungs, the esophagus, and the mediastinum] Preduprezhdenie i lechenie shoka pri transplevral'nykh operatsiiakh na legkikh, pishchevode i sredostenii. Leningrad, Medgiz, 1963. 191 p. (MIRA 16:7)

(SURGERY, OPERATIVE) (SHOCK)

BEREZOV, Yu.Ye.; PRONIN, V.I.; PISAREVSKIY, A.A.; DOBROVA, N.B.

Cardiotomy on "dry" left ventricle. Eksper. khir. i anest. 7 no.5:11-13 S-O '62. (MIRA 17:10)

1. Iz otdeleniya khirurgii sosudov (zav.- doktor med. nauk Yu. Ye. Berezov) i laboratorii iskusstvennogo krovoobrashcheniya (zav.- kand. med. nauk V.S. Rayevskiy) Instituta serdechno-sosudistoy khirurgii (dir.- prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR.

L 58302-65 EWT(1)/EWT(m)/EPF(n)-2/EWG(m) Pi-4/Pu-4 IJP(c)

ACCESSION NR: AP5010047 UR/0368/65/002/002/0181/0183 29

AUTHORS: Pisarevskiy, A. I.; Seleznev, A. F. 13

TITLE: Use of radioluminescence 21 for the investigation of the mechanism of radiation shielding 19

SOURCE: Zhurnal prikladnoy spektroskopii, v. 2, no. 2, 1965, 181-183

TOPIC TAGS: biological shielding, radioluminescence, luminescence quenching, radiation protection

ABSTRACT: The authors propose to use a physical model to study the shielding effect of various protectors against biological radiation damage. The model is based on the analogy between the quenching action of certain substances in liquid scintillators and the protective action on biologically vital molecules and supermolecular structures (such as DNA), for both in quenching and in protection part of the radiation energy is diverted from the target. The liquid scintillator was PPO dissolved in dioxane, and standard protectors were used

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ACCESSION NR: AP5010047

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of the standard type (AET, MOT, MPA, and ST), all in aqueous solutions with pH = 1.7. The tests consisted of determining the influence of the introduced molecules on the luminescence spectrum of the PPO and the dependence of the scintillation efficiency on the amount of introduced protector. The results show that AET, MPA, and MOT divert part of the energy of the electronic excitation that is capable of migration. The data on the quenching action are in qualitative agreement with the radiobiological data on phages and show that the energy diversion (quenching) is an effective factor in shielding. Original article has: 1 figure and 1 table.

ASSOCIATION: None

SUBMITTED: 23Jun64 ENCL: 00 SUB CODE: OP, LS

NR REF SOV: 011 OTHER: 003

AR

Card 2/2

L 00770-66 EWT(l)/EWP(e)/[illegible]m)/EWP(i)/FCC/T/EWP(t)/EWP(b)/EWA(c) IJP(c)
JD/JG/JAJ /WH

ACCESSION NR: AP5012556 UR/0181/65/007/005/1447/1454

AUTHOR: Belyustin, A. A.; 44,55 Ostanevich, Yu. M.; 44,55 Pisarevskiy, A. M.; 44,55 Tomilov, S. B.; 44 Wu, Pai-shih; Cher, L. 44,55

TITLE: The Mossbauer effect in alkali-iron-silicate glasses 16,44,55

SOURCE: Fizika tverdogo tela, 21,44,55 v. 7, no. 5, 1965, 1447-1454

19 / 13

TOPIC TAGS: Mossbauer effect, emission line, glass property, silicate glass, line splitting

ABSTRACT: The authors investigated the Mossbauer effect with the aid of apparatus with sinusoidal motion, described briefly elsewhere (ZhETF v. 46, 482, 1964). The source was Co^{57}, introduced by diffusion into metallic chromium. The width of the emission line was 0.35 mm/sec, and the position of the emission line practically coincided with the absorption line of stainless steel. The absorbers were powdered glass pressed together with small amounts of MgO. All the measurements were made at room temperature. Various compositions of glass were investigated. Values were obtained for the main parameters of the Mossbauer spectra (line width, chemical shift, quadrupole splitting). It is shown that the form of the Mossbauer spectra is governed by the main features of the structure and chemical composition of the glasses. The ratios of the different valence and structural states of iron in the

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ACCESSION NR: AP5012556

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glass are obtained as functions of the Fe_2O_3 concentration in the glass and of the amount and nature of the alkali iron. It is shown that the Mossbauer effect can be used to detect iron oxides colloidally dispersed in glass. "The authors thank A. N. Murin and Docent M. M. Shul'ts, who stimulated their interest in this topic, and also A. I. Sekirin, V. I. Khlus, L. A. Marshak, and G. V. Filonenko for help with the measurements." Orig. art. has: 7 figures, 7 formulas, and 2 tables.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research); Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: 07Dec64 **ENCL:** 00 **SUB CODE:** SS

NR REF SOV: 010 **OTHER:** 008

Card 2/2

BELYUSTIN, A.A.; PISAREVSKIY, A.M.; SHUL'TS, M.M.; NIKOL'SKIY, B.P.

Glass electrode sensitive to the change in oxidation potential of solution. Dokl. AN SSSR 154 no.2:404-406 Ja'64. (MIRA 17:2)

1. Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova. 2. Chlen-korrespondent AN SSSR (for Nikol'skiy).

BELYUSTIN, A. A., PISAREVSKIY, A. M.

"Concerning the structural state of iron in glass.

report submitted for 4th All-Union Conf on Structure of Glass, Leningrad, 16-21 Mar 64.

KHATSKELEVICH, Viktor Abramovich; PISAREVSKIY, A.M., red.; ZHITNIKOVA, O.S., tekhn. red.

[Calculation of the operation of a plate modulated oscillator using new types of electron tubes]Raschet rezhimov generatora pri anodnoi moduliatsii na novykh lampakh. Moskva, Gosenergoizdat, 1962. 109 p. (MIRA 16:3)
(Oscillators, Electron-tube)

BELYUSTIN, A.A.; PISAREVSKIY, A.M. (Leningrad)

Structural state of iron in glass from studies of the electrode properties of sodium iron silicate glasses. Zhur. fiz. khim. 38 no.12:2913-2919 D '64. (MIRA 18:

1. Leningradskiy gosudarstvennyy ordena Lenina universitet imeni A.A. Zhdanova.

PISAREVSKIY, A.N.

USSR/Electricity - Semiconductors

G-3

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 12217

Author : Shul'man, A.R., Pisarevskiy, A.N.

Inst : -

Title : Temperature Variations in the Work Functions of n and p Germanium.

Orig Pub : Zh. tekhn. fiziki, 1955, 25, No 9, 1547-1555

Abstract : Description of a method and of a setup for simultaneous determination of the temperature dependences of the work function and of the position of the level of the chemical potential in n and p germanium. The method of voltage-current characteristics with an external photoeffect (Likurskiy, N.I., On the Photoeffect, GTTI, 1932), as applied to semiconductors, has made it possible to determine the following: (a) The contact difference in potential V_c and thereby the work function of the cathode. (b) The distance δ from the level of the chemical potential

Card 1/3

PISAREVSKIY, A N

USSR/Nuclear Physics C-2

Abs Jour : Referat Zhur - Fizika, No 5, 195[illegible], 11024

Author : Nemilov, Yu.A., Ovchinnikov, V.M., Pisarevskiy, A.N., Teterin, Ye.D.

Inst : Not given

Title : Use of the FEU-12 in Scintillation Spectroscopy.

Orig Pub : Atom. energiya, 1956, No 4, 51-56

Abstract : Report of the results of a test of a new photomultiplier, FEU-12, which has a system of 12 dynodes of the shutter (venetian blind) type and has considerably better parameters than the FEU-19. The FEU-12 has a Sb-Cs or Bi-Ag-Cs cathode 15 mm in diameter. The bismuth-silver-cesium cathode is sensitive over a widere range of the spectrum, extending to 7500 A. Of the [illegible]2 tested specimens, 20 had an integral cathode sensitivity ( ) above 45

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USSR/Nuclear Physics C-2

Abs Jour : Referat Zhur - Fizika No 5, 1957, 11024

microamperes per lumen (the light source of type A with a color temperature of 2848°); individual specimens have 80 microamperes per lumen. The coefficient of amplification at a normal working voltage on the order of 1600 volts amounts to 10^5 -- 4 x 10^6. The static light characteristic of the FEU-12 is linear to output currents above 50 ma, and prolonged operation at this current is possible. The linearity of the amplitude curve, upon exposure to gamma rays, extends to 4.5 Mev (in combination with a NaI(Tl) crystal). The value of the signal picked off reaches 40 -- 50 volts. The FEU-12 does not require a special choice of power supply; for all tested specimens, the best resolution was obtained when the voltages evenly divided between all the electrodes, including the gap between the cathode-- and the first dynode, where the voltage difference should be 2 -- 3 times greater. For all photoelectron multipliers with

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USSR/Nuclear Physics C-2

Abs Jour : Ref Zhur - Fizika, No 5, 1957, 11024

45 microamperes per lumen. The width of the photo line Cs^{137} does not exceed 13%. The pulse build-up time determined by the FEU was 1.5 -- 2 x 10^{-8} seconds. The FEU-12 has a low noise level (less than 15 kev in the scale of the NaI (Tl) crystal) and good stability (the shifts of the Cs^{137} photo line from the initial position does not exceed 1 -- 1.5% within 12 hours).

Card 3/3

PISAREVSKIY, A.N.

5

1-4E2c(j)

2 May

Characteristics of some plastic scintillators. M. M. Koton, Yu. N. Panov, A. N. Pisarevskii, and T. V. Timofeeva. *Pribory i Tekh. Eksperimenta* 1957, No. 1, 49-55.—The authors have investigated polystyrene plastics which contain p-terphenyl, m-terphenyl and 1,1,4,4-tetraphenylbutadiene, and 1,6-diphenylhexatriene. Optimum scintillation output is observed with a concn. of 2% of additives. Absorption spectra, luminescence spectra, and emission time are measured in order to det. the characteristics of the most scintillation plastics. 7 references. A. Krembeller

Pisarevskiy, A.N.

1-RML

Distr: 4E3d

3717

INVESTIGATION OF γ-RAYS FROM Po–Li AND Po–Mg NEUTRON SOURCES, Yu. A. Nemilov and A. N. Pisarevskii. Soviet Phys. JETP 5, 115-17 (1957) Aug.

1/1

RML

PISAREVSKIY, A. N.

"Problems of the Application of the Soviet-made Photo-Multipliers in Scintillation Spectroscopy,"

A Conference on Electron and Photo-Electron Multipliers; Radiotekhnika i Elektronika, 1957, Vol. II, Nr. 12, pp. 155[illegible]-1557 (USSR)

Abst: A conference took place in Moscow during February 2[illegible] and March [illegible], 1957 and was attended by scientists and engineers from Moscow, Leningrad, Kiev and other centres of the Soviet Union. Altogether, 2[illegible] papers were read and discussed.

1[illegible]-3-4[illegible]

AUTHORS: [illegible]ovskiy, A.N. [illegible] Il'[illegible], Y[illegible]. V.

TITLE: The T[illegible] of Nuclear Spectroscopy [illegible] [illegible] Nuclear Spectroscopy ([illegible] [illegible] VII [illegible] soveshchani[illegible] [illegible])

PERIODICAL: [illegible], [illegible], [illegible] (USSR)

ABSTRACT: [illegible] [illegible] Leningrad.
[illegible] [illegible] A. P. [illegible] A. [illegible] A. [illegible] Physico-Technical I[illegible] [illegible] A. [illegible] A. [illegible] in the Institute [illegible] At[illegible] of the USSR. [illegible] re[illegible] [illegible] [illegible]oids. A[illegible] I. I. A[illegible] [illegible] [illegible].
[illegible]. β-[illegible]trosco[illegible]. A [illegible] number of β-[illegible]

Card 1/[illegible]

[illegible] AA-[illegible]

[illegible] Khlopin. [illegible]

[illegible] Radium Institute imeni V. G. Khlopin of the Academy of Sciences of the USSR (Radiyevyy institut im. V. G. Khlopina AN SSSR)

[illegible]D: [illegible]

AVAILABLE: [illegible]

1. Nuclear spectroscopy-Conference 2. Spectrometers 3. Crystals

AUTHOR: NEMILOV, JU. A., PISAREVSKIY, A. N. PA - [illegible]070

TITLE: Investigation of γ-Rays from Po-Li and Po-Mg Sources (Issledovanie γ-lucej ot neutronnych istocnikov Po-Li i Po-Mg, Russian).

PERIODICAL: Zhurnal Eksperimental'noi i Teoret. Fiziki, 1957, Vol [illegible], Nr [illegible], pp 139-140 (U.S.S.R.)
Received: 3 / 1957 Reviewed: 4 / 1957

ABSTRACT: In connection with bombarding lithium and magnesium with α-particles of polonium all reactions (an) and (ap) are energetically possible with the exception of the reactions (an) on Li^6 and Mg^{24}. The γ-rays are created in the sources considered here by the production of a nucleus (which is the product of the corresponding reactions in an excited condition) or by its further radioactive decay. The γ-spectra are studied by means of a monocrystal or a pair-scintillation spectrometer with highly stable multipliers FEU-12.

The γ-spectrum of the source Po-Mg obtained here is illustrated in form of a diagram. γ-lines of the following energies were observed: 0,23; 0,8; 1,25; 1,85; 2,3; 4,2 MeV. On the lines observed on the monocrystal spectrometer an unsuccessful attempt was made to determine the n-γ-coincidences. This was also impossible on the occasion of the measurements carried out with

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Investigation of γ -Rays from Po-Li and Po-Mg Sources

the pair-spectrometer because of the low efficiency of this spectrometer. The γ -rays with 0,6 MeV are the most likely to correspond to the known line observed in the decay of the Po^{210} line and the γ -lines with 1,85; 1,25 and 2,3 MeV apparently result from one of the reactions ap. The line 1,85 MeV apparently corresponds to the decay of Al^{28} but the γ -lines 1,25 and 2,3 MeV are apparently the result of the decay of Al^{29}. Some indirect but rather clear indications of the existence of γ -rays of the order of magnitude of 4 MeV are found in previous American works. In the present paper γ -rays with the energy of 4 MeV were found by means of the pair-spectrometer. They can be reduced to one of the exothermal reactions of the type (αn): either $Mg^{25}(\alpha n)Si^{28}$ with the energy Q = 2,7 MeV or $Mg^{26}(\alpha n)Si^{29}$ with Q = 0,04 MeV. Other reactions cannot lead to products of so highly excited states. An n-γ-coincidence with the line 4,2 MeV could not be found immediately. A special examination with decelerated neutrons showed that those observed here cannot correspond to some adhesive reactions of the neutron to any material of the device.

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PA - 2070

Investigation of γ-Rays from Po-Li and Po-Mg Sources.

The intensity of the weak line with the energy ~ 1 MeV increased considerably as soon as the measuring crystal CsJ(Tl) or NaJ(Tl) was surrounded by a scatterer of J That is why the authors endeavor to attribute the given line to the non-elastic scattering of the neutrons by J or to the discharge of the excited condition of Al^{28} or Al^{29}. The γ-rays with the energy of 0,[illegible] MeV probably result from one of the reactions of the type (αp) mentioned here. Finally, the γ-spectrum of the source Po-Li is discussed on the basis of a diagram.

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress

Card 3/3

SOV/120-58-5-10/[illegible]

AUTHORS: Vyazemskiy, V. O., Drapchinskiy, L. V., Pisarevskiy, A. N., Trifonov, V. V. and Firsov, Ye. I.

TITLE: A Non-Overloading Amplifier with a Wide-Channel Discriminator (Neperegruzhayushchiysya usilitel' s shirokokanal'nym diskriminatorom)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 5, pp 40-44 (USSR)

ABSTRACT. The device described consists of the following principal parts: 1) a non-overloading linear amplifier comprising a pre-amplifier, a phase inverter, pulse-forming networks, an output amplifier and a power amplifier; 2) an integrating wide-channel pulse discriminator consisting of a lower and upper gate, a charging diode, a resetting triode, an anti-coincidence circuit, the output univibrators of the integrating and differentiating channels followed by power amplifying stages; 3) supply sources. The non-loading amplifier is based on the circuit described by Fairstein (Ref. [illegible]) and its [illegible] is shown in Fig. 1. The pre-amplifier [illegible]

1/[illegible]

SOV/120- [illegible]

A Non-Overloading Amplifier with a Wide-Channel Discriminator

This unit is based on a cathode coupled circuit, while the phase inverter consists of one tube with anode and cathode resistances. The pulses are formed after the inverter by means of RC networks or by a short circuited delay line (.5 μ sec duration). The final amplifier consists of 5 tubes; the first 3 form a "triple" and are provided with negative feedback; the 4th tube operates as a cathode follower. The output signal of the amplifier is applied to an external [illegible] analyser and to the discriminator of the device. The discrimination level can be varied from 5 to 105 V in steps of 1 V; the voltage divider circuit is shown in Fig. [illegible]. The instrument is designed for the operation with a scintillation counter. The maximum gain of the amplifier is [illegible] x 10^5 and the effective noise amplitude at the output of the amplifier is less than .04 V. The pulse rise time [illegible] .15 μs and the pulse duration is: a) [illegible], 5, 10 or [illegible] μs if RC networks are used, and b) 1 μs if a delay line is used. The overloading coefficient of the amplifier is over [illegible]. The amplifier is asymmetrical in that it does not amplify negative pulses. The amplitude characteristic of the

Card [illegible]

[illegible]OV/12[illegible]-5[illegible]-5-10[illegible]

A [illegible] Amplifier with a Wide-Channel Discriminator

[illegible] is shown in Fig.5, from which it is [illegible] from [illegible] to 100 V. The instrument [illegible] 100 A and [illegible] - 50 V at 10 A. [illegible] 5 English references.

ASSOCIATION: [illegible] AN SSSR (Radium Institute of [illegible] USSR [illegible])

SUBMITTED: [illegible]

Card [illegible]4/[illegible]

SOV/120-58-6-15/32

AUTHORS: Vyazemskiy, V. O., Drapchinskiy, L. V., Pisarevskiy, A N
Trifonov, V. V. and Firsov, Ye. I.

TITLE: A Counting Instrument Employing Dekatrons (Pereschetnyy pribor s ispol'zovaniyem dekatronov)

PERIODICAL: Pribory i tekhnika eksperimenta, 1958, Nr 6, pp 78-81 (USSR)

ABSTRACT: Since a dekatron is a comparatively new device and since its parameters depend to a large extent on the trigger circuit employed to effect the transfer from one cathode to the next, a detailed investigation of the triggering methods was carried out. The authors tried a number of triggering circuits and found that the most successful one was that employing a double triode in which one of the anodes was provided with a delay capacitance; the circuit is shown in Fig.1z. The dekatron employed was of the type 10/SG1S and had 2 systems of guide electrodes. The actual counter (see the diagram of Fig.5) consisted of the following elements: 1) a binary counting decade based on vacuum tubes 2) 4 counting decades based on dekatrons, 3) a timer, 4) a circuit for controlling the timer and the input gate circuit, 5) a gating circuit, 6) an intensity meter, 7) a quartz crystal calibrator, 8) a power supply source, and 9) a mechanical register.

Card 1/3

Pisarevskiy A.N.

AUTHORS: Pisarevskiy, A. N., Teterin, Ye. D. 48-1-5/

TITLE: On the Use of Domestic Phosphors for Scintillation-Counting (O primenenii otechestvennykh fosforov dlya stsintillyatsionnogo scheta).

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1958, Vol. 22, Nr 1, pp. 23-23 (USSR).

ABSTRACT: It is the short abstract of a lecture. NaJ-Tl-crystals of home origin (Institute for Crystallography, VIMS, Khar'kov Factory for Chemical Reagents / Khar'kovskiy zavod khimreaktivov /) were investigated. They show satisfactory spectrometric properties and for the γ-line of Cs^{137} (600 keV) a dissolving power of not below 12°/o and for better crystals of 8°/o. In the case of CsJ-Tl a resolving power of 10-11°/o was obtained. The time of fluorescence in CsJ-Tl amounted to 1,2-1,5 μsec. During continuous storage and under the influence of radioactive radiation the crystals turn red. In this connection the time of fluorescence increases to ~ 2,5 μsec. The authors performed preliminary investigations for the purpose of finding effective crystals for the recording of neutrons (slow as well as rapid ones). In the Laboratory [illegible]. I. [illegible] LiF-crystals with various activators (Tl, Ti, Sn, Eu, Mn and others) were grown. Of a number of tested activators it was only possible to

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On the Use of **Domestic** Phosphors for Scintillations-Counting. 48-1-[illegible]

introduce Ti and Sn to any considerable amounts. On introduction of titanium the scintillation amounted to ~1/30 of that of the NaJ-Tl-crystal (on radiation with γ-rays of the same energy). On introduction of Sn the scintillation was 2-2,5-fold higher than in the preceding case. In both cases the time of fluorescence amounted to less than 2 µsec. The activator-quantity in both cases was apparently not the optimum one. The tests are being continued. - I. V. Stepanov placed the BaF_2-crystals (without activator) grown by him at the authors' disposal. They are interesting for the recording of rapid neutrons. According to preliminary measurements the quantity of scintillation in BaF_2 amounts to 12 - 15°/o of that of NaJ-Tl. This is very promising and the investigations in this direction are continued. CaF_2-Eu, CaF_2-Ce and CaF_2-Gd-crystals were tested. The former two yielded a scintillation of ~8-10°/o of that of NaJ-Tl, whereas the third one showed a considerably smaller scintillation. The time of luminescence in BaF_2 as well as in activated fluorite amounted to less than a microsecond. It is assumed that further careful investigations of the phosphors investigated will give the possibility of obtaining effective neutron-detectors.

AVAILABLE: Library of Congress.

Card 2/2 **1. Chemistry 2. Crystal phospors-Application**

21(7), 21(8)

AUTHORS: Nemilov, Yu. A., Pisarevskiy, A. N., Soshin, L. D. SOV/56-35-3-44/61

TITLE: On the First Excited State of Tb^{159} (O pervom vozbuzhdennom sostoyanii Tb^{159})

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 3, pp 800 - 801 (USSR)

ABSTRACT: In the course of the investigation of the γ-radiation of Dy^{159} (the decay of which is caused solely by K-capture) by means of a scintillation spectrometer, a line with double energy in momentum distribution is observed besides the K-X-rays of Tb^{159} (44,5 keV). This line is produced by the total summation of quanta with the energy of 44,5 keV. According to these results, the observed line with 90 keV is the result of the summation of two cascade-like emitted quanta with half the energy. In the case of the first of these quanta there is K-emission of Tb^{159} after K-capture, and the second quantum is produced by the discharge of the

Card 1/3

On the First Excited State of Tb^{159} SOV/56-35-3-44/61

first excited state of Tb^{159}. N. P. Heydenburg and G. M. Temmer (Ref 2) presumed that the energy of the first excited state of Tb^{159} amounts to 57.5 keV. J W Mehelih et al (Ref 3) observed conversion electrons which correspond to this excited state. γ-rays which correspond to the discharge of this state were not observed in any of the aforementioned works. If the line mentioned exists at all, it amounts, according to the results obtained by this paper, to not more than 1% of the 44.5 keV peak. Additional verification was carried out by means of a summating spectrometer with a CsJ(Tl)-crystal. The momentum-distribution thus obtained is illustrated by means of a diagram. The first excited state of Tb^{159} discharges because of the strong 57.5 keV conversion line also with emission of a K X-ray radiation, in which case the conversion coefficient is $>99\%$. The authors thank A. N. Murin and B. K. Preobrazhenskiy for placing a good radiation source at their disposal. There are 2 figures and 4 references, 3 of which are Soviet.

Card 2/3

On the First Excited State of Tb^{159} SOV/56-35-3-44/61

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences, USSR)

SUBMITTED: June 4, 1958

Card 3/3

21(8)

AUTHORS: Nemilov, Yu. A., Pisarevskiy, A. N. SOV/56-35-3-45/61
Soshin, L. D.

TITLE: The Investigation of γ-Rays in the Decay of As^{78}
(Issledovaniye γ-luchey pri raspade As^{78})

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 3, pp 801 - 802 (USSR)

ABSTRACT: It is known that As^{78}, when it decays (T = 90 min), emits 2 groups of β^--particles (E_β = 4,1 MeV, 70% and E_β = 1,4 MeV, 30%). In this decay also γ-rays of 0,27 MeV and 0.615 MeV were observed. On the strength of the data available it is possible even to draw conclusions with respect to the decay scheme of this isotope. The authors produced As^{78} by bombarding the separated isotope Se^{78} with 14 MeV neutrons in accordance with the reaction (np). Measurements were carried out by means of a scintillation-γ-spectrometer with a 128-channel analyzer. When using a single spectrometer the following γ-lines were observed: 500 keV with T=5-6 minutes; 270, 610, 800, 1280, 2680 keV with T = 90 ± 10 min. (lines with high intensity); 80, 345, 690, 1200, 1620, 1880, 2020, 2160 keV (lines with low intensity); besides there are

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indications for the presence of a line with very low intensity ($\sim$2400 keV). When a summating spectrometer was used the following summated lines (with the period 90 ± 10 min.) were observed: 420, 2700, 1650 keV. The transitions with the period 90 min can be assigned to the β^--decay $As^{78} \rightarrow Se^{78}$. The γ-line 500 keV (T = 5 - 6 min.) is not formed by the annihilation of positrons at any β^+-decay, nor are any lines of different enery and T = 5 - 6 min observed. Therefore, this line was probably caused by the discharge of any metastable state produced by the interaction of neutrons with Se^{78}. The isomeric lines of the other possible reactions on $Se^{78}(n2n, n2p, n\alpha, npn)$ have already been sufficiently well investigated, and no isomer with the observed state (T = 5 - 6 min., E = 500 keV) is observed. Therefore, As^{78} probably has a metastable state with the energy of 500 keV. A possible decay scheme for As^{78} is given in form of a diagram. The authors thank A. N. Protopopov and his collaborators for irradiating the prepara-

Card 2/3

The Investigation of γ-Rays in the Decay of As^{78} SOV/56-35-3-45/61

tions with neutrons. There are 1 figure and 3 references, 2 of which are Soviet.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences, USSR)

SUBMITTED: June 4, 1958

Card 3/3

PISAREVSKIY, A.N.

Akademiya nauk SSSR. Radiyevyy institut

Trudy, t. IX (Transactions of the Radium Institute, Academy of Sciences USSR, Vol 9) Moscow, Izd-vo AN SSSR, 1959. [illegible] p. Errata slip inserted. 1,700 copies printed.

Ed.: N.A. Perfilov, Doctor of Physical and Mathematical Sciences; Ed. of Publishing House: I.M. Aron; Tech. Ed.: A.V. Smirnova.

PURPOSE: The volume is intended for physicists.

COVERAGE: The book represents volume 9 of the Transactions of the Radium Institute and contains the results of studies conducted at the Institute chiefly from 1944 to 1956. There are a number of articles dealing with the study of nuclear reactions occurring with particles of different energies ranging from several eV to hundreds of MeV. Others treat different problems of the physics of neutrons. Results of studies of various neutron sources, neutron energy distribution in a moderator (water), and other problems connected with the theory of neutron interaction with matter are presented. The majority of the articles are concerned with problems of method. The authors provide a complete description of [illegible] and [illegible] No personalities are mentioned. References accompany individual articles.

[illegible] Nucleus Fission due to High Excitation Energy

[illegible] Fission of Heavy Nuclei [illegible] due to High Excitation Energy

[illegible]

[illegible] and A.N. Pisarevskiy. Study of Gamma Rays of Certain Neutron Sources

[illegible] and A.N. Pisarevskiy. Study of Gamma Ray Spectrum of Po-Be Neutron Source

[illegible] Gamma Rays [illegible]

[illegible]

Floakiskaya, A. A.

[illegible] (SSS)

Akademiya nauk SSSR. Radiyevyy institut

Trudy, t. IX (Transactions of the Radium Institute, Academy of Sciences USSR, Vol. 9) Moscow, Izd-vo AN SSSR, 1959. [illegible] p. Errata slip inserted. 1,700 copies printed.

Ed.: N.A. Perfilov, Doctor of Physical and Mathematical Sciences; Ed. of Publishing House: T.M. Arons; Tech. Ed.: A.V. Smirnova.

PURPOSE: The volume is intended for physicists.

COVERAGE: The book represents volume 9 of the Transactions of the Radium Institute and contains the results of studies conducted at the Institute chiefly from 1954 to 1956. There are a number of articles dealing with the study of nuclear reactions occurring with particles of different energies ranging from several ev up to hundreds of Mev. Others treat different problems of the physics of neutrons. Results of studies of various neutron sources, neutron energy distribution in a moderator (water), and other problems connected with the theory of neutron interaction with matter are presented. The majority of the articles are concerned with problems of method. The authors provide a complete description of the construction of [illegible] under laboratory conditions [illegible] of the results of [illegible] contemporary individual articles. No personalities are mentioned. References [illegible]

Zhamov, V.P. Uranium Fission due to High Excitation Energy [illegible]

Zhamov, V.P. Fission of Heavy Nuclei [illegible] due to High Excitation Energy [illegible]

[illegible]

[illegible] and A.N. [illegible] Experimental Study of Gamma Rays [illegible] Neutron [illegible] Sources [illegible]

[illegible] T.A., and [illegible] Preliminary Study of Gamma Ray Spectrum of Fission Neutrons [illegible]

[illegible]

[illegible]

[illegible]

SOV/120-59-1-40/50

AUTHORS: Zlobin, L. I., Nemilov, Yu. A., Pisarevskiy, A. N.

TITLE: The Behaviour of Some Types of Photomultipliers in a Weak Magnetic Field (Povedeniye nekotorykh tipov fotoumnozhiteley v slabom magnitnom pole)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 1, [illegible] (USSR)

ABSTRACT: Scintillation counters are often used in the neighbourhood of strong magnets. In order to use photomultipliers successfully under such conditions special magnetic screens must be used and hence it is necessary to know the properties of photomultipliers working in the weak magnetic fields. In the work described in this paper a longitudinal magnetic field was applied to the photomultiplier under investigation by placing the latter inside a long solenoid. The current supplying the solenoid was controlled to 1%. The field was uniform along the length of the photomultiplier, the fall-off at the edges being less than 2%. Pulse height measurements were carried out, using the position of the photopeak of Cs^{137}. The rise times were measured by delayed self coincidences (Refs 1 and 2). Fig 1 shows the dependence of the total sensitivity of the photomultiplier FEU-11 and the resolution on the average magnitude of the magnetic field along the axis of the

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SOV/120-59-1-40/50

The Behaviour of Some Types of Photomultipliers in a Weak Magnetic Field

solenoid. The resolution curve is shown dotted. At ±1 oersted the total sensitivity increases by 10-1[illegible]% [illegible] best resolution is observed at 6 oersted. Experim[illegible] shown that the changes indicated by Fig 1 are due [illegible] the effect of the magnetic field on the ele[illegible] betw[illegible] photocathode and the first dynode. The remaining part [illegible] photomultiplier is practically independent of the effe[illegible] the magnetic field in the range 0-[illegible]0 oersted. When the field is increased to 00 oersted the total sensitivity is re[illegible] by a factor of . Figs 2 and 3 show identical curves for other photomultipliers while Fig 4 shows the effect of the magnetic field on the rise time for two different pho[illegible] multipliers. Results have shown that the venetian blind [illegible] tion is the least sensitive to magnetic fields and [illegible] est magnetic field effects occur at the "input" of ph[illegible]

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SOV/120-59-1-40/50

The Behaviour of Some Types of Photomultipliers in a Weak Magnetic Field

multipliers. There are 4 figures and 2 Soviet references.

ASSOCIATION: Radiyevyy institut AN SSSR (Radium Institute, Academy of Sciences of the USSR)

SUBMITTED: January 14, 1958.

Card 3/3

AUTHORS: Vyazemskiy, V.O., Pisarevskiy, A.N., Selyanin, V. [illegible]Ye. SOV/120-59-[illegible]/[illegible]

TITLE: Linear Pulse Gate Circuit (Skhema proportsional'nogo propuskaniya impul'sov)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr [illegible], p 117 (USSR)

ABSTRACT: The arrangement described in Ref 1 uses special beam-deflection valves. The present circuit, Fig [illegible], contains only standard pentodes 6P 15 P. Until the arrival of the gate pulse at the grid of Л_2 the anode current of Л_1 flows through Л_2, Л_4 and R_a. If a signal should arrive at the grid of Л_1 the increase in anode current does not evoke a change in output voltage since the anode of Л_2 is effectively earthed via the capacitance of 0.25 µf. There is no direct transmission through the feedback path R_1, R_2, C_1 since the output resistance of the cathode follower Л_5, Л_6 is small. When a gate pulse is applied the anode current of Л_1 switches from Л_2 to Л_3. If at the same time a signal pulse arrives then Л_1 works as an anode follower. The circuit passes

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Linear Pulse Gate Circuit SOV/120-59-[illegible]

linearly single-polarity pulses of either sign, amplitudes up to 100 ohms and rise-times better than 0.1 μs.

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There is 1 figure and 1 English reference.

ASSOCIATION: Radiyevyy Institut AN SSSR (Radium Institute of the Ac. Sc. USSR)

SUBMITTED: June [illegible], 1958

05[illegible]8
SOV/120-[illegible]

AUTHORS: Pisarevskiy, A. N. and Soshin, L. D.

TITLE: An Instrument for the Automatization of a Single-Channel Scintillation Gamma-Spectrometer (Pribor dlya avtomatizatsii odnokanal'nogo stsintillyatsionnogo gamma-spectrometra)

PERIODICAL: Pribory i tekhnika eksperimenta, [illegible] Nr [illegible] pp 90-[illegible] (USSR)

ABSTRACT: The apparatus described will automatically record differential spectra on a pen-recorder chart. The apparatus consists of a differential single-channel discriminator similar to that described by Farley (Ref 4), a scaling unit, an integrator (Ref 5), a control unit, a timer (Ref 6) and a pen-recorder (EPP-09). The work of the apparatus begins with the switching on of the timer which produces pulses at a repetition frequency chosen beforehand. These [illegible] are then fed into the control unit. The first [illegible] opens the output of the discriminator and the [illegible] of the pulses at the output of the discriminator [illegible]. After the 10th or the 100th pulse from the timer the output of the discriminator is cut off and the

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An Instrument for the Automatization of a Single-Channel Scintillation Gamma-Spectrometer

discriminator threshold is moved to the next [illegible] the spectrum. The discriminator is thus [illegible] moved along the entire spectrum. The total number [illegible] possible points in the spectrum histogram is [illegible] The time of counting at each point may be varied [illegible] 15 sec and [illegible] min. The basic circuit of the apparatus is shown in Fig. [illegible]. Fig 4 shows the linearity of the recording of the number of pulses. Deviations from linearity are not greater than 1% Fig 5 shows [illegible] typical spectrum of the photo-peak of Cs[illegible] The instrument does not use a step-by-step switch [illegible] [illegible] switching devices but instead [illegible] [illegible] There are [illegible] figures and [illegible] references [illegible] Soviet [illegible]

ASSOCIATION Radiyevyy institut AN SSSR (Radium Institute [illegible] AS USSR)

SUBMITTED March 10 [illegible]

Card 2/2

05467
SOV/120-59-3-[illegible]-46

AUTHORS: Pisarevskiy, A. N., and Soshin, L. D.

TITLE: The Best Working Conditions for FEU-13 Photomultipliers (Ob optimal'nom rezhime fotoumnozhiteley FEU-13)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 3, pp 143 (USSR)

ABSTRACT: This multiplier is of the venetian-blind type and has a modulator electrode. Fig 1 shows the amplitude resolution of the multiplier as a function of voltage between photocathode and modulator for several different voltages on the modulator (with the overall voltage on the photomultiplier constant). Fig 2 shows analogous results for the overall sensitivity. It is concluded that the voltage between photocathode and modulator should be twice that between modulator and first dynode. There are 2 figures and 2 Soviet references.

ASSOCIATION: Radiyevyy institut AN SSSR (Radium Institute, Academy of Sciences USSR)

SUBMITTED: May 10, 1958

Card 1/1

SOV/120-59-4-14/50

AUTHORS: Lomonosov, I. I., Pisarevskiy, A. N., Soshin, L. D.

TITLE: The Conversion Efficiency of NaJ(Tl) Crystals

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 4, pp 70-71 (USSR)

ABSTRACT: Crystals grown by the Kyropoulos and Stockbarger methods are used with γ-rays of energy up to 1330 keV (the table lists the values, where χ is given by the second formula on p 70). Figs 1 and 2 show respectively the relation of Δ^2 and Δ^4 to 1/E. It is concluded that the resolving power is overestimated unless proper allowance is made for the quantity b (the inherent resolving power) in the first formula on p 70. The paper contains 2 figures, 1 table and 7 references, 3 of which are English and 4 Soviet.

ASSOCIATION: Radiyevyy institut AN SSSR (Radium Institute, Academy of Sciences USSR)

SUBMITTED: June 23, 1958.

Card 1/1

SOV/120-59-4-15/50

AUTHORS: Nemilov, Yu. A., Pisarevskiy, A. N., Soshin, L. D.

TITLE: A Form of Distortion in Line Spectra Produced by NaJ(Tl) Crystals

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 4, pp 72-73 (USSR)

ABSTRACT: A 128-channel analyzer is used with 660, 280 and 70 keV γ-rays to show that some of the crystals examined in the previous paper in fact split monochromatic lines into two (Fig 1 shows some examples of the resulting spectra for one crystal with the sources in various positions). It is concluded that the Kyropoulos method gives perfect crystals and that the Stockbarger method sometimes gives faulty ones. The paper contains 1 figure and 3 references, 2 of which are Soviet and 1 English.

ASSOCIATION: Radiyevyy institut AN SSSR (Radium Institute, Academy of Sciences, USSR)

SUBMITTED: June 6, 1958.

Card 1/1

NEMILOV, Yu.A.; PISAREVSKIY, A.N.

Gamma rays from some neutron sources. Trudy Radiev inst.AN SSSR 9:61-71 '59. (MIRA 14:6)

(Neutrons) (Gamma rays)

NEMILOV, Yu.A.; PISAREVSKIY, A.N.

Gamma spectrum from a Po-Be neutron source. Trudy Radiev. inst.AN SSSR 9:72-77 '59.

(Neutrons) (Gamma rays) (MIRA 14:6)

VYAZEMSKIY, V.O.; PISAREVSKIY, A.N.; TETERIN, Ye.D.

One possibility of increasing the resolving power of fast coincidence circuits. Trudy Radiev.inst.AN SSSR 9:150-151 '59. (MIRA 14:6)
(Photoelectric multipliers)

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A005/A001

Translation from: Referativnyy zhurnal, Fizika, 1960, No. 6, p. 271, # 14774

AUTHORS: Pisarevskiy, A.N., Teterin, Ye.D.

TITLE: On the Amplification Factor of Photomultipliers 25

PERIODICAL: Tr. Radiev. in-ta, AN SSSR, 1959, Vol. 9, pp 152-154

TEXT: The comparison of the amplification factors of photomultipliers of the 1В (1V) type (group of 8 pieces), which were measured under statical (σ_{st}) and pulse (σ_p) conditions, showed considerable differences of systematical character (on the average for the group $\sigma_{st} : \sigma_p \approx 1.7$). The authors, basing on analogous experiments with the amplifiers of the ФЭУ-12- (FEU-12-) 25 type (the dynodes of which are produced from Cu - Al - Mg - alloy), which did not show marked differences, conclude that the cause of differences in case of the amplifiers of the 1V type (Al - Mg - alloy) consists in the material of their dynodes.

Translator's note: This is the full translation of the original Russian abstract

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VYAZEMSKIY, V.O.; PISAREVSKIY, A.N.; TETERIN, Ye.D.

Antisaturation amplifier for amplitude investigations. Trudy Radiev. inst.AN SSSR 9:155-163 '59.
(Amplifiers (Electronics)) (MIRA 14:6)

NEMILOV, Yu.A.; PISAREVSKIY, A.N.; TETERIN, Ye.D.

Scintillation γ-spectrometers. Trudy Radiev.inst.AN SSSR 9:181-191 '59. (MIRA 14.6)

(Spectrometer)

LOMONOSOV, I.I.; NEMILOV, Yu.A.; PISAREVSKIY, A.N.; TETERIN, Ye.D.

Photomultipliers designed for scintillation spectroscopy. Trudy Radiev.inst.AN SSSR 9:164-180 '59. (MIRA 14:6)
(Photoelectric multipliers)

ZLOBIN, L.I.; PISAREVSKIY, A.N.; SHAPIRO, B.L.; SHAMOV, V.A.

Methods of measuring radioactivity in human subjects. Med. rad. 4 no.6:85-87 Je '59. (MIRA 12:8)

1. Iz Instituta radiatsionnoy gigiyeny Ministerstva zdravookhraneniya RSFSR.

(RADIOACTIVITY,
intravital measurement of human radioactivity, review (Rus))

21(7)

SOV/48-23-2-18/20

AUTHORS: Nemilov, Yu. A., Pisarevskiy, A. N., Soshin, L. D.

TITLE: γ Rays in the Decay of As^{78} (γ-Luchi pri raspade As^{78})

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 2, pp 255-256 (USSR)

ABSTRACT: According to references 1, 2 also γ rays of 0.27 and 0.610 Mev were determined in the decay of As^{78} (τ = 90 min). The investigations of this paper have shown that in the decay of As^{78} (τ = 5-6 min) a line is found at 500 kev, strong lines for τ=90 min at 270, 610, 800, 1280 and 2680 kev and weaker lines at 80, 345, 690, 1200, 1620, 1880, 2040 and 2160 kev. The lines obtained (τ = 90 min) are attributed to transitions in the As^{78} $\xrightarrow{\beta^-}$ Se^{78} decay; the 500 kev line (τ = 5 min) corresponds to the transition from a metastable to a basic state of As^{78}, which then decays to Se^{78} in the reaction mentioned. A scheme of the decay with all transitions obtained is given. The authors thank A. N. Protopopov and his coworkers for neutron irradiation of the isotopes. There are 1 figure and

Card 1/2

γ Rays in the Decay of As^{78} SOV/48-23-2-18/20

4 references, 2 of which are Soviet.

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR)

Card 2/2

21(3) SOV/48-23-2-19/20

AUTHORS: Nemilov, Yu. A., Lomonosov, I. I., Pisarevskiy, A. N., Soshin, L. D., Teterin, Ye. D.

TITLE: Some Problems on the Linearity of the Scintillation Spectrometer (Nekotoryye voprosy lineynosti pri stsintillyatsionnoy spektrometrii)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 2, pp 257-262 (USSR)

ABSTRACT: In a more accurate investigation of the scintillation reaction of NaJ(Tl) in the case of γ excitation the authors found deviations from the reaction linearity up to 20% within the range of $E_{\gamma} < 100$-150 kev (Ref 6). This problem was investigated according to a method already applied in previous papers. The measurements were carried out by means of crystals produced at the Institut kristallografii AN SSSR (Crystallographical Institute of the AS USSR) and in the Khar'kov Works. The crystals were bred according to methods devised by Kiropulos and Stokbarger. The measurement results of various crystals NaJ(Tl), CsJ(Tl), KJ(Tl) on deviation of the scintillation reaction from linearity within the range 10-1500 kev are

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SOV/48-23-2-19/20

Some Problems on the Linearity of the Scintillation Spectrometer

listed in a table. Perceptible deviations were found within the range 50-100 kev. It represented a minimum which attained different values in the individual crystals (Fig 1); the least value was found with KJ(Tl). Besides, the dependence of resolving power on the energy of the measured radiation and the effectiveness of conversion of the crystals were investigated. In the case of ideal crystals there is a linear dependence of the square half width of spectrometer lines Δ_c^2 on E_γ^{-1}. In the case of small E_γ values this dependence is expressed by $\Delta_c = \sqrt{\Delta_K^2 + \Delta_\Phi^2}$, where Δ_K denotes crystal resolution and Δ_Φ that of FEU. In the case of high energies the effectiveness of conversion $\varkappa$ is to be determined according to formula (6) (Ref 14). For a number of E_γ values the corresponding $\varkappa$ values are given in %. A duplication of lines of the total energy by NaJ(Tl) crystals was found, the presence of which possibly may be attributed to crystal water. There are 4 figures, 1 table, and 15 references, 4 of which are Soviet.

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SOV/48-23-2-19/20

Some Problems on the Linearity of the Scintillation Spectrometer

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR)

Card 3/3

21(3) SOV/48-23-2-20/20

AUTHORS: Pisarevskiy, A. N., Teterin, Ye. D.

TITLE: On the Photomultiplier Amplification in Time Measurements (Ob usilenii fotoumnozhiteley pri vremennykh izmereniyakh)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 2, pp 263-264 (USSR)

ABSTRACT: In a previous paper (Ref 1) the authors have shown that the amplification of various FEU types decreases during the transition from steady excitations to pulses of mμsec. The strongest decrease was found in the case of an FEU with good time resolution. In the present paper FEU-1v, FEU-33, FEU-13m and FEU-6810 were investigated by the methods applied in reference 1. The period of growth of FEU pulses (the mean time parameters of FEU investigated are given in table 1) was measured by the method of self-coincidence by means of a plastic scintillator with $\tau \approx 3.10^{-9}$ sec. The authors found a difference between the values of the coefficients of steady amplification and the pulse amplification in the case of the initial RC of the chain. This difference depends on RC and is expressed by the formula $K = (1+n)L$, where n denotes the dependence on RC. It

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On the Photomultiplier Amplification in Time Measurements

has the least value for FEU-1v and the largest one for FEU-33. In the case of FEU-33 the authors found also a decrease of value n with an increase of the first range U_1 (250 → 500 v). There are 2 tables and 3 references, 2 of which are Soviet.

Card 2/2

S/120/60/000/01/015/051
E192/E382

AUTHORS: Pisarevskiy, A.N. and Selyaninov, Yu.Ye.

TITLE: ~~A Non-overloading~~ Amplifier with an Improved Rise Time

PERIODICAL: : Pribory i tekhnika eksperimenta, 1960, Nr 1,
p 63 (USSR)

ABSTRACT: A detailed circuit diagram of the amplifier is shown in Figure 1, p 63. The circuit is based on the amplifier described by V.O. Vyazemskiy et al (Ref 2). However, some modifications have been introduced so that both the "triples" were provided with conductive feedback which resulted in an improved overload characteristic of the device. A forming line or a suitable RC time constant can be connected into the anode of the fifth tube (see the figure) in order to obtain a quasi-equilibrium pulse. The amplifier employs tubes, types 6Zh9P and 6E5P, having a high figure of merit. It was therefore possible to obtain the following performance with the amplifier: rise time of 5×10^{-8} sec, gain of 10^{3}, overloading factor of 200, maximum output signal of 120 V and maximum

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E192/E382

A Non-overloading Amplifier with an Improved Rise Time

input signal of 20 V. The device is used in a scintillation spectrometer. The authors thank V.O. Vyazemskiy for valuable advice.
There are 1 figure and 2 Soviet references.

ASSOCIATION: Radiyevyy institut AN SSSR (Radium Institute of the Ac.Sc., USSR)

SUBMITTED: December 3, 1958

Card 2/2

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8-2
S/120/60/000/0[illegible]
E192/E482

AUTHORS: Pisarevskiy, A.N., S[illegible]hin L.D., S[illegible]

TITLE: An Automatic Portable Single-Channel Scintillation Gamma Spectrometer Based on Transistors

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No.4, pp.29-35

TEXT: A detailed description of the instrument, with detailed circuit diagrams and photographs is given. The input pulses for the instrument are obtained from the output of a photo electron multiplier. These negative pulses are applied to an emitter follower and then to a diode discriminator. The pulses at the output of the discriminator are limited at a suitable level. These pulses are then applied to the input of millivolt selectors of the lower and upper levels, which are connected as an anticoincidence circuit acting as a differential discriminator. The pulses from this discriminator are fed to a standard shaping circuit and then to a scale-estimating circuit (counter) which changes the effective capacitance of a registering or counting device. The signal from the scale-estimator circuit is applied to the registering counter which converts the discrete information into a continuous signal. The voltage from this circuit which is proportional to the numb

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S/120/60/000/004/004/028
E192/E482

An Automatic Portable Single Channel Scintillation Gamma
Spectrometer Based on Transi

of the registered pulses is then applied to an automatic recording milliammeter. The instrument operates as follows: a suitable time delay is set by a timer. An initial discrimination level is set by means of bias circuits. The timer is then switched on and the information to be processed is fed in. After the termination of a pre-determined delay time, the timer produces a pulse which is applied to the automatic biasing circuit and a control circuit. The latter resets the memory circuits. The automatic biasing circuit changes the level of the discriminator to a new value. In order to select a suitable scale for the instrument and a suitable delay time, the instrument is provided with an intensimeter (Ref.1). The discriminator of the instrument consists of diode limiters and millivolt selectors of the lower and upper levels (based on transistors) and an anticoincidence circuit (based on transistors). The scale estimating circuit consists of 7 identical binary cells which are based on transistors. The registering device is based on the system analogous to that

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E192/E482

An Automatic Portable Single-Channel Scintillation Gamma-Spectrometer Based on Transistors

described by O.I Sumbayev (Ref.4). It consists of 2 identical binary counters (memory and registering counters) which are connected "in opposition" and contain "AND" circuits between the individual cells. The timer is based on dekatrons and uses a stabilized frequency of 10 kc/s as the standard timing waveform. The automatic biasing circuit for the discriminator is based on binary dividers and consists of 8 cells. The pick up head of the instrument employs a photomultiplier type ФЭУ-13 (FEU-13), whose output pulses have an amplitude of 10 V. It is therefore possible to use these pulses without amplification. With a supply voltage of 1880 V it is possible to obtain signals with an amplitude of 10 to 12 V for the γ-line of 660 keV for Cs^{137} (with a crystal of NaI(Tl)). The instrument is capable of determining 128 points of the investigated spectrum, the width of the discriminator level being 0.1 V, which corresponds to the amplitude range of 0.1 to 12.7 V. The time delay can be 4, 20, 60, 120, 300 and 600 sec. The stability of the instrument during 3 to 4 hours

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E192/E482

An Automatic Portable Single Channel Scintillation Gamma-Spectrometer Based on Trans:

of continuous operation is better than 2% and the resolution for a γ-line of Cs^{137} is about 10%. The authors express their gratitude to Yu.A.Nemilov and V.O Vyazemskiy for valuable advice and for discussing the results. There are 14 figures and 6 references: 4 Soviet and 2 non-Soviet

ASSOCIATION Radiyevyy institut AN SSSR
(Radium Institute AS USSR)

SUBMITTED May 28 1959

Card 4/4

21.5300

S/120/60/000/006/001/045
E032/E314

AUTHORS: Pisarevskiy, A.N. and Soshin, L.D.

TITLE: The Technique of Fast Coincidences with Slow Scintillators (A Review)

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No. 6, pp. 3 - 13

TEXT: A review is given of the various high-resolution coincidence techniques employing sodium and caesium crystals (Tl activated). The review is based largely on published Western work. Among the Soviet work quoted is the monograph by Gol'danskiy et al ("Statistics of Nuclear Particle Counting") where a discussion is given of the theoretical estimates of the minimum resolving time. Work by Belozerskiy et al (Ref. 6 - to be published) on the leading edges of NaI and CsI pulses is briefly mentioned. Another Soviet paper quoted is that by Mel'nikov (Ref. 12), who has described a special amplifier for use in conjunction with caesium-iodide crystals. The latter author obtained a resolving time of 7×10^{-8} sec with

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Card 1/2

S/120/60/000/006/001/045
E032/E314

The Technique of Fast Coincidences with Slow Scintillators (A Review)

Co^{60} γ-rays. The only other Soviet paper quoted is that by Meyerovich and Zelichenko (Ref. 16) who have described some trigger circuits for use with short rise-times. There are 15 figures, 1 table and 22 references: 7 Soviet and 15 non-Soviet.

ASSOCIATION: Radiyevyy institut AN SSSR
(Radium Institute, AS USSR)

SUBMITTED: May 10, 1960

Card 2/2

69277

S/051/60/008/04/022/032
E201/E691

AUTHORS: Nemilov, Yu.A., Belozerskiy, G.N. and Pisarevskiy, A.N.

24 3500

TITLE: On the α/β Ratio of a Liquid Scintillator 19

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 4, pp 554-555 (USSR)

ABSTRACT: The α/β ratio is the ratio of the scintillation yields of α- and β-particles. The present paper deals with the effect of an additional solvent on the α/β ratio of 2,5-diphenyloxazole (PPO) in toluene. The additional solvent was naphthalene and the α- and β-sources were Pu^{239} and Cs^{137} respectively. The scintillations were recorded and analysed by means of a photoelectric multiplier FEU-13 and an analyser AMA-35. 13 Figs 1-3 show that on addition of a second solvent both the α- and β-particle light yields rise, the ratio α/β becomes greater and the region of the activator (PPO) concentration in which variations of α/β can be observed is extended to 5 g/litre. The authors investigated also the properties of scintillators consisting of PPO and POPOP (4-di-[2-(5-phenyloxazolyl)]-benzene) in toluene, PPO and POPOP in polystyrene gels, and the properties of stilbene crystals. In PPO + POPOP + toluene systems the ratio α/β was 10% smaller (at all concentrations of PPO) than in solutions without POPOP. The same was true of the scintillation yield of PPO + POPOP + toluene: the fall of

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On the α/β Ratio of a Liquid Scintillator

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E201/E691

the scintillation yield on addition of POPOP is either due to large losses on transfer of energy from PPO to POPOP or due to mutual exchange of energy between them. The results obtained in polystyrene gels were identical with those obtained in solutions, i.e. the scintillator viscosity does not affect the ratio α/β, at least up to 10^3 stokes. In the case of stilbene crystals the ratio α/β was equal to the "saturation" value (0.06) of PPO dissolved in toluene. There are 3 figures and 5 references, 3 of which are Soviet and 2 English.

SUBMITTED: July 13, 1959

Card 2/2

S/051/60/009/006/016/018
E201/E191

AUTHORS: Nemilov, Yu. A., Gridnov, K. A., and Pisarevskiy, A.

TITLE: The Intensity of the Slowly Decaying Component of Stilbene Luminescence Excited with α-Particles 19

PERIODICAL: Optika i spektroskopiya, 1960, Vol 9, No 6, p 79

TEXT: The authors report a study of the slowly-decaying component of luminescence of stilbene excited either with α-particles of ≈ 4 MeV energy or with electrons produced by irradiation with 660 keV γ-rays from Cs^{137} 19 (the maximum electron energy was 480 keV). It was found (a table on page 79.) that the intensity of the slowly decaying component (relative to the total intensity) was greater in the case of electron excitation than the value reported by Brooks (Ref. 4). With increase of dE/dX (this quantity is not defined in the article, cf. Ref 2) of the exciting particles the relative intensity of the slowly-decaying component increased. The results confirmed Brooks' ideas on the nature of the slowly-decaying component. The apparatus used is shown in a figure on p. 792, where

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E201/E191

The Intensity of the Slowly Decaying Component of Stilbene Luminescence Excited with α-Particles

1 is a crystal, 2 is a photomultiplier, 3 is a device used to separate out the slowly decaying component, 4 is an attenuator, 5 is a differential comparison circuit, 6 is a recorder, 11 and 12 are amplifiers.

There are 1 figure, 1 table and 4 English references.

SUBMITTED: June 23, 1960

Card 2/2

VYAZEMSKIY, V.O.; LOMONOSOV, I.I.; PISAREVSKIY, A.N.; PROTOPOPOV, Kh.V.; RUZIN, V.A.; TETERIN, Ye.D.. Prinimal uchastiye KLYUCHNIKOV, V.N.; RYBAKOV, B.V., red.; SMOLYAN, G.L., red.; POPOVA, S.M., tekhn. red.

[Scintillation method in radiometry] Stsintilliatsionnyi metod v radiometrii. By V.O.Viazemskii i dr. Moskva, Gos. izd-vo lit-ry v oblasti atomnoi nauki i tekhniki, 1961. 429 p. (MIRA 14:9)
(Scintillation counters)

[illegible]
[illegible]

AUTHORS: Belozerskiy, [illegible] and [illegible]skiy, A. [illegible]

TITLE: On the Form of the Scintillations from CsI (Tl) Crystals

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 1, [illegible]

TEXT: The form of CsI (Tl) scintillations has been investigated by R. S. Storey et al (Ref. 1) and [illegible]. The present authors have studied the form of scintillations of CsI (Tl) crystals (molecular concentration of Tl [illegible] 0.1-0.15 %) irradiated with α-particles from Pu[illegible] and electrons produced in the phosphor by Cs137 and Co60 γ-rays. The scintillations were examined using the [illegible] oscillograph and [illegible] (FEU-1) photomultiplier [illegible] results [illegible] in the following table.

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On the Form of the Scintillations. [illegible]/120/61/000/007/[illegible]
E032/E114

Parameters of the scintillations µsec	[illegible] α-particles			Electrons*		
	Ref.	Ref.	Present work	Ref.	Ref.	Present work
Rise-time of the current pulse	0.05		0.09	[illegible]		[illegible]
Time constant of the principal component of luminescence (from trailing edge of current pulse	0.5		[illegible]	[illegible]		[illegible]
Time constant of the principal component of the luminescence (from rise time of the voltage pulse)	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]

Card 2/3

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E032/E114

On the Form of the Scintillations from CsI (Tl) Crystals

* Footnote to table. Results in Refs 1-3 are for 660 keV electrons. The present results are for 100-1330 keV

The crystals employed in the present work were manufactured by Kharkovskiy zavod khimicheskikh reaktivov (Khar kov Chemical Reagents Factory) It is concluded that the crystals produced by this factory can be successfully used in distinguishing between particles with different scintillation time constants. There are 1 table and 4 references 1 Soviet and 3 English

ASSOCIATION: Radiyevyy institut AN SSSR
(Radium Institute AS USSR)

SUBMITTED February 25, 1960

Card 3/3

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S/120/61/000/004/008/034
E202/E592

21.6000

AUTHORS: Vyazemskiy, V.O., Pisarevskiy, A.N. and Selyaninov, Yu.Ye.

TITLE: Single channel differential discriminator for the coincidence circuits of the scintillation counters

PERIODICAL: Pribory i tekhnika eksperimenta, no 4, 1961, 64-66

TEXT: The authors have designed and tested a single channel differential discriminator for work with fast coincidences circuits employing slow scintillators. In order to eliminate the effect of the build-up time of the investigated pulse on the resolution time of the coincidence circuit a saturated amplifier has been used as described earlier by G. P. Mel nikov (Ref 1: PTE 1959, No.5, 61). In this arrangement the investigated impulse is fed simultaneously to the input of the expander and to the saturated amplifier. The latter is stable under overload conditions. The signal emerging from the saturated amplifier triggers the Schmidt trigger circuit which in turn sends an impulse via the cathode follower into the delay and pulse shaping lines, where it is shaped into a short pulse corresponding to the leading edge of the saturated pulse. The

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